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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/840,129  
Filing Date: May 05, 2004  
Appellant(s): HEIDEL, RAYMOND

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J.D. Harriman II  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 3/14/08 appealing from the Office action mailed 3/7/07.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,941,274 B1	Ramachandran et al	9-2005
US 2004/0182677A1	Katou et al	9-2004

6,315,194 B1

Graef et al

11-2001

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramachandran et al (US 6,941,274 B1) in view of Katou et al (US 2004/0182677A1).

As described in Claims 26-30, Ramachandran discloses an automated transaction machine (ATM) of the recycling currency type, as mentioned in Ramachandran's abstract and at col. 2, lines 45-59, said ATM intended to be used in a vending machine for the purpose of providing ATM capabilities such as accepting and dispensing currency notes.

As described in Claims 26-30, Ramachandran does not expressly disclose, but Katou et al discloses a note validator (30), a validator processor (35) with memory (107d), a note box (60, 80 and 81), a temporary storage hopper (40), a transportation unit (501a-h), (502a-b), (503a-c), (504), (901a-e), (902a-e) and (903a-e), the notes being sent through validator (30) in either direction (501b). Note that the deposit/withdrawal port (20) can be construed as the validator opening, with the entire

structure (1) being construed as the validator. Note also that bill discrimination unit (30) can be construed as inherently sensing actual bill pattern information for comparison with template patterns stored in memory (107d) and as inherently determining the value of bills detected as received and dispensed by the apparatus.

Regarding Applicants' newly added claim language, the phrase "for accepting currency notes and issuing credits to the host processor to cause the dispensing of the commercial products" is considered intended use language with no patentable weight. Nonetheless, Katou highly suggests that it performs the credit/debit accounting function. See Katou, figure 2 and paragraph 62. Note that this is how all bill handling devices operate. Katou similarly is considered to suggest a configuration to "accept a dispense change instruction from said host processor", since this is how bill handling devices operate.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have embodied Katou's note handling mechanism in place of Ramachandran's note handling mechanism for use in a combination ATM/vending machine that dispenses merchandise.

The suggestion/motivation to do so would have been for the purpose of providing a smaller, more reliable note handling device for vending machines which does not cause bill jams. See Katou, paragraph 5, first five lines and paragraphs 9-11. Further, one ordinarily skilled in the art would have recognized the benefit of combining an ATM and vending machine because customers drawn to the vending machine to obtain money through the ATM device of the vending machine may be more willing to make

impulsive purchases from the vending machine portion of the apparatus due to the availability of currency, thereby resulting in increased sales of vended goods as compared to a free-standing vending machine.

3. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramachandran et al (US 6,941,274 B1) in view of Graef et al (US 6,315,194 B1).

As described in Claims 26-30, Ramachandran discloses an automated transaction machine (ATM) of the recycling currency type, as mentioned in Ramachandran's abstract and at col. 2, lines 45-59, said ATM intended to be used in a vending machine for the purpose of providing ATM capabilities such as accepting and dispensing currency notes.

As described in Claims 26-30, Ramachandran does not expressly disclose, but Graef et al discloses a note validator (72 and 258), a validator processor (254) with memory (256) (see also Graef col. 6, lines 10-25), a note box (30, 32, 34, 36, 38 and 40), of which any of said note boxes can be used as a temporary storage hopper, a transportation unit (17, 192, 285) (see also figures 12-15), the notes being sent through validator (72 or 258) in either direction. Note that the deposit/withdrawal port (20) can be construed as the validator opening, with the entire structure (10) being construed as the validator. Note also that bill discrimination/validator unit (72 and 258) can be construed as inherently sensing actual bill pattern information for comparison with template patterns stored in memory such as (256) and as inherently determining the value of bills detected as received and dispensed by the apparatus. See also Graef, col. 14, lines 11-55.

Regarding Applicants' newly added claim language, the phrase "for accepting currency notes and issuing credits to the host processor to cause the dispensing of the commercial products" is considered intended use language with no patentable weight. Nonetheless, Graef highly suggests that it performs the credit/debit accounting function as described in col. 13, lines 25-35 and col. 14, lines 25-55. Note that this is how all bill handling devices operate. Graef similarly is considered to suggest a configuration to "accept a dispense change instruction from said host processor", since this is how bill handling devices operate.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have embodied Graef's note handling mechanism in place of Ramachandran's note handling mechanism for use in a combination ATM/vending machine that dispenses merchandise.

The suggestion/motivation to do so would have been for the purpose of providing a more reliable note handling device for vending machines which does not cause bill jams and maintains the operability of the sheet path. See Graef, col. 2, lines 5-30 and 40-50. Further, one ordinarily skilled in the art would have recognized the benefit of combining an ATM and vending machine because customers drawn to the vending machine to obtain money through the ATM device of the vending machine may be more willing to make impulsive purchases from the vending machine portion of the apparatus due to the availability of currency, thereby resulting in increased sales of vended goods as compared to a free-standing vending machine.

**(10) Response to Argument**

**I. Argument regarding the combination of Ramachandran and Katou.**

Appellant asserts that Ramachandran does not disclose teach or suggest a vending machine having an ATM which also dispenses change during dispensing transactions as well as allowing users to withdraw and deposit to the vending machine ATM.

Since Appellant's Independent Claims are substantially similar, Claim 26 will be focused on as exemplary.

Appellant's Claim 26 recites as follows.

**26. A customer service device comprising:**

**a host machine for the vending of commercial products, said host machine including a host processor, and a housing;**

**a note acceptor-dispenser validator system for accepting currency notes and issuing credits to the host processor to cause the dispensing of the commercial products;**

**said note acceptor-dispenser validator system being further configured to accept a dispense change instruction from said host processor to cause the processing, and dispensing of notes and coins as change based on the communication with said host processor, wherein said acceptor-dispenser validator system is mounted in said housing, said note acceptor-dispenser validator system including;**

**a note validator for receiving notes and sensing data relating to the**

**authenticity, denomination, type and condition of notes received by said note validator, said note validator generating signals corresponding to the sensed data for each received note;**

**a validator processor for receiving and comparing said sensed data signals with stored data to validate said notes;**

**a note box configured to receive and hold notes received by said note validator;**

**a note hopper for receiving and storing up to a selected number of notes of a pre-selected denomination which are received by said note validator; and**

**a transportation unit for directing said notes determined to be authentic to one of said note box and said note hopper and for dispensing notes from said note hopper in response to an instruction from said validator processor.**

As can be seen in lines 2 and 3 of Claim 26 above, all that is required is a "host machine" and "a housing". Ramachandran discloses a host machine (10) which is shown to have a housing in figure 1. Ramachandran even discloses a note validator (58) which senses data, as mentioned at col. 15, lines 19-26. Note in line 2 of Claim 26 that the limitation "for the vending of commercial products" does not carry patentable weight according to MPEP 2114, which states that "apparatus claims must be structurally distinguishable from the prior art". Nonetheless, Ramachandran does state



Art Unit: 3653

that host machine (10) is a host machine for vending commercial products at col. 8, lines 27-38. Col. 8, lines 27-38 state as follows.

Machine 10 is an automated teller machine whose primary functions are to dispense and receive currency notes. It should be understood however that other embodiments of the invention may be machines whose primary functions include conducting other types of transactions. These may include for example the dispense of motor fuel, the dispense of tickets, the dispense of vouchers, the dispense of gaming materials or other functions that a user may carry out using the machine. In other embodiments of the invention the machine may be another type of transaction machine, such as check cashing machine, vending machine, or medication dispensing machine.

Emphasis provided.

Thus, it is clear that Machine (10) is disclosed in the form of a vending machine which is understood in the art as "vending commercial products".

The claim next calls for a note acceptor-dispenser validator system in lines 4-6. Functional/intended use language follows which states that the validator is "for accepting currency notes and issuing credits to the host processor to cause the dispensing of the commercial products.

Ramachandran discloses the following concerning the note validator, at col. 15, lines 40-47.

The note inlet transport in the described embodiment includes note validator 58. In the described embodiment note validator 58 is a standard commercially available note acceptor which is operative to sense and determine the validity of certain types of bills. In the case of a machine which is configured to receive and dispense twenty dollar bills, the validator may be a device for sensing whether an inserted note is a valid twenty dollar bill.

Standard note validators account for the cash sent though the validator and track the amounts of valid bills received. Additionally, vending machines require change to be tendered. The term "change" is defined by Meriam-Webster's Collegiate Dictionary,

10th ed., at p. 191 as meaning an "exchange", "money in small denominations received in exchange for an equivalent sum in larger denominations", "money returned when a payment exceeds the amount due", and "coins, especially of a low denomination."

Ramachandran further mentions programming the machine at col. 15, lines 59-62, col. 26, lines 4-9, col. 27, lines 7-14, col. 27, line 60-col. 28, line 12. Ramachandran discloses that the machine performs accounting and tracking at col. 26, lines 14-18. Standard validators are well-known in the art to be interchangeable between machinery. Ramachandran mentions at col. 28, lines 13-14, that various validators. Where Ramachandran clearly states that his "ATM" machine is embodied as a vending machine, it would have been obvious to one of ordinary skill in the art to provide Ramachandran's apparatus with the capability to provide change so that change would be given to customers who tender cash or bills which are more than what the price of the desired item costs. This is how transactions are generally performed in business, but especially in the typical vending machine, as recited in Ramachandran. Ramachandran's validator must account for cash received, i.e., tendered as that is how it operates. Bills are sensed and then tallied to accrue an amount of bills received. Also, bills dispensed are also tracked. Therefore, it would have been obvious that Ramachandran's validator and ATM in the form of a vending machine would be configured to dispense change.

Note also that Ramachandran at col. 1, lines 20-37 states the following.

Automated transaction machines are known in the prior art. A common type of automated transaction machine is an automated teller machine (ATM). ATMs have been developed which are capable of performing a variety of transactions including the dispensing of currency notes. Other types of transaction

Art Unit: 3653

machines dispense notes and other types of sheets to users such as bank tellers, cashiers and other service providers. Other types of automated transaction machines dispense items such as tickets, travelers checks, scrip, vouchers or gaming materials. **Automated transaction machines generally dispense such materials while assessing appropriate charges and credits to the respective accounts of the user, the machine owner and the provider of the dispensed materials.** For purposes of this description an automated transaction machine will be considered as any machine that is capable of carrying out transactions including transfers of value.

Emphasis provided. Thus, Ramachandran discloses that automated transaction machines (ATM's) "assess appropriate charges and credits to a user's account." Since Ramachandran also defines an ATM as "any machine that is capable of carrying out transactions including transfers of value" in lines 34-37, then this passage read in light of later passages that state that such an ATM is embodied as a vending machine at the very least imply/suggest that change is given to customers using the vending machine with appropriate accounting performed by the machine in conjunction with its controller (52) and memory (38).

Further regarding the concept of change, note that Ramachandran discloses an ATM that is retrofitted into an existing vending machine. Ramachandran also teaches that such a vending machine requires making change to a customer at col. 41, lines 25-35, reproduced as follows.

153) In some embodiments the controller may operate to provide the merchant user with messages prompting the user to indicate the number and denomination of notes they wish to receive. This may be valuable to a merchant user who requires particular denominations of notes from the machine to carry out the efficient operation of their business, such as for making change. Various approaches to presenting merchant users with withdrawal options may be provided in embodiments of the invention through programming of a controller which controls operation of the machine.

Since such a vending machine environment requires that change be made, it would have been obvious to cause Jones' apparatus to also make change from a withdrawal box since such a withdrawal box is designed for both ingress and egress of bills. Additionally, note that it would have been obvious based upon basic principles of commerce to make change with various denominations of bills, as would be necessary to complete a purchase with a larger bill than the price of the item being vended. Depending upon the prevalence of larger bills, one ordinarily skilled in the art would have found it obvious to make change for any particular sized bill that customers would be expected to want to use to make a transaction, therefore promoting increased sales.

Appellant on p. 18, last paragraph, first five lines of the brief, seems to assert that Ramachandran's apparatus does not disclose that a "single validator" performs both the ATM functions and the change functions of the vending machine. Note, however, that one characteristic of both ATM's and vending machines is the maximizing of use of a limited amount of space inside the housings. As mentioned above, Ramachandran discloses an ATM embodied as a vending machine. When making determinations of obviousness, "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). It is hard to understand why one ordinarily skilled in the art would not have recognized the market effects of space and cost saving aspects to influence using a single validator to perform both ATM and vending machine transaction functions.

Katou is used to provide teaching and motivation for the inclusion of particulars regarding a note validator (30), a validator processor (35) with memory (107d), a note box (60, 80 and 81), a temporary storage hopper (40), a transportation unit (501a-h), (502a-b), (503a-c), (504), (901a-e), (902a-e) and (903a-e), the notes being sent through validator (30) in either direction (501b).

Applicant asserts on p.19, lines 3-6 that Katou's temporary storage unit (40) does not disclose the "note hopper" of Claim 26, because it does not receive and store a "selected number of notes of a pre-selected denomination",. However, it is posited that if Katou's temporary storage unit does store all notes of all denominations, this group of notes includes "a selected number of notes of a pre-selected denomination."

The full limitation of Claim 26 reads "a note hopper for receiving and storing up to a selected number of notes of a pre-selected denomination which are received by said note validator". First, note that all of the verbage after the words "a note hopper" is considered functional/intended use language as keyed by the word "for". Additionally, under MPEP 2115, the item worked on by an apparatus in an apparatus claim, such as Claim 26, does not limit said apparatus. In this case, the particular notes stored in the note hopper do not limit Apparatus Claim 26.

Katou also discloses the note box of Claim 26 found six lines from the bottom. Katou's note boxes (60, 80 and 81). These note boxes are only required to be "configured to receive and hold notes received by said note validator." As can be seen from figures 24-26, notes are fed from the bill discriminating unit (30) to each of boxes (60, 80 and 81).

Katou discloses and teaches use of a temporary storage box, a deposit box, a withdrawal box, a reject box and a recycle box. These boxes are described in detail in paragraph 2 of Katou as follows.

[0002] The conventional bill deposit/withdrawal machine mounted on an automated teller machine used in, for example, a banking organ or the like includes a deposit/withdrawal port for accepting bills (or paper money) inputted by a user, delivering the bills inputted by the user, and accepting bills to be discharged to a user, a bill discriminating unit for discriminating bills, and a bill transport path for transporting bills while passing them through the bill discriminating unit. The construction of the conventional bill deposit/withdrawal machine further includes the combination of units including a temporary storage box for temporarily accepting deposited bills, a deposit box for accepting deposited bills, a withdrawal box for delivering bills for withdrawal, a recycle box for accepting and delivering bills for both deposit and withdrawal, a reject box for accepting deposited bills which are not accepted in the deposit box or the recycle box and bills which are delivered from the withdrawal box, but not withdrawn, and a load/recovery for delivering bills to be supplemented for the recycle box and accepting bills recovered from the recycle box, and so forth. Various constructions have been proposed for the construction and arrangement of those units and the route of the bill transport path for connecting those units.

Paragraphs 64-66 further discuss detail of the use of these boxes in Katou's apparatus.

[0064] The bill deposit/withdrawal mechanism 1 is composed of a deposit/withdrawal port 20 for which a user makes the input/takeout of bills, a bill discriminating unit 30 for discriminating bills, a temporary storage box 40 for accepting deposited bills once until the materialization of a transaction, one deposit box 60 for accepting, at the time of deposit, bills for which the materialization of a transaction is completed, one withdrawal box 70 for accepting bills for withdrawal, two recycle boxes 80 for both deposit and withdrawal, a load/recovery box 81 for accepting bills to be supplemented for the recycle boxes 80 and bills recovered from the recycle box, a bill transport path 50 for transporting bills to the deposit/withdrawal port 20, the temporary storage box 40, the deposit box 60, the withdrawal box 70, the recycle boxes 80, and the load/recovery box 11 while passing the bills through the bill discriminating unit 30, and a control unit which is not illustrated.

Detail Description Paragraph - DETX (8):

Art Unit: 3653

[0065] As shown in FIG. 4, a control unit 35 is connected to the body control unit 107 of the machine through the bus 107a. The control unit 35 performs the control of the bill deposit/withdrawal mechanism 1 in accordance with a command from the body control section 107 and the detection of the state of the bill deposit/withdrawal mechanism 1, and sends the state of the bill deposit/withdrawal mechanism 1 to the body control section 107, as required. In the bill deposit/withdrawal mechanism 1, the control unit 35 is connected to a driving motor, electromagnetic solenoid or sensor of each unit (the deposit/withdrawal port 20, the bill discriminating unit 30, the temporary storage box 40, the bill transport path 50, the deposit box 60, the withdrawal box 70, the recycle boxes 80, and the load/recovery box 81) to control the driving of actuators in accordance with transactions while monitoring the states by use of the sensors.

Detail Description Paragraph - DETX (9):

[0066] As shown in FIG. 3, the present deposit/withdrawal machine 1 is composed of an upper transport mechanism 1a and a lower bill mechanism 1b. The upper transport mechanism 1a is composed of the deposit/withdrawal port 20, the bill discriminating unit 30, the temporary storage box 40, and the bill transport path 50. The lower bill mechanism 1b is composed of the deposit box 60, the withdrawal box 70, the recycle boxes 80, the load/recovery box 81, and an openable/closable transport path 90 provided in front of respective accepting boxes. Furthermore, the lower bill mechanism 1b is mounted within the bill box casing 106 made of a thick iron plate having a thickness of approximately 50 mm. The transport path of the upper transport mechanism 1a is connected to the transport path of the lower transport mechanism 1b through a coupling transport path 501h.

As is discussed in Katou, the **recycle boxes (80)** take in bills only to be stored, **not to be withdrawn**. Thus these bills are construed as being stored in this box, i.e., recycle box (80) in a **non-dispensable condition**. Note that the term *non-dispensable and dispensable*, although not recited in Appellant's claims in the instant case, are descriptive of what is occurring in Katou's boxes and is used accordingly. Katou also discloses a **withdrawal box (70)**. Such a **withdrawal box** is disclosed as storing bills for both **deposit and withdrawal**, and is thus construed as holding bills stored in a **dispensable condition**. The **temporary storage box (40)** is also likewise considered

to hold bills stored in a **dispensable condition** because the bills are fed to it and are withdrawn from it to be dispensed, despite their acceptability to the machine, back to the user. Such a dispensing event can also be considered to be the same situation as if the user received the entire amount of cash back. Even if the temporary box is ignored, the withdrawal box expressly discloses storing bills for both deposit and withdrawal to make change.

## **II. Argument regarding the combination of Ramachandran and Graef.**

Claim 26 is again focused on as exemplary of Appellant's claims.

In answer to Appellant's assertions regarding Ramachandran, the arguments above are incorporated herein.

Concerning Graef, Appellant seems to focus upon the type of notes/items received by note boxes (30, 32, 34, 36, 38 and 40). Again, as stated above with respect to Katou, MPEP 2115 states that the item worked on by an apparatus does not limit the apparatus claim. Therefore, since these "box structures" are configured to accept various notes, Appellant's note boxes read on Graef's boxes.

As described above, Ramachandran describes combining an ATM with a vending machine. It is therefore follows that it would have been obvious to combine Katou's ATM and bill path devices with Ramachandran's vending machine for the purpose of including a device which is small, compact and reduces/eliminates bill jams or to combine Graef's ATM and bill path devices with Ramachandran's vending



machine for the purpose again of improving the bill handling characteristics of the vending machine bill handler.

Additionally note that Graef et al discloses a note validator (72 and 258), a validator processor (254) with memory (256) (see also Graef col. 6, lines 10-25), a note box (30, 32, 34, 36, 38 and 40), of which any of said note boxes can be used as a temporary storage hopper, a transportation unit (17, 192, 285) (see also figures 12-15), the notes being sent through validator (72 or 258) in either direction. Note that the deposit/withdrawal port (20) can be construed as the validator opening, with the entire structure (10) being construed as the validator. Note also that bill discrimination/validator unit (72 and 258) can be construed as inherently sensing actual bill pattern information for comparison with template patterns stored in memory such as (256) and as inherently determining the value of bills detected as received and dispensed by the apparatus. See also Graef, col. 14, lines 11-55.

Regarding Appellant's phrase "for accepting currency notes and issuing credits to the host processor to cause the dispensing of the commercial products" is considered intended use language with no patentable weight. Nonetheless, Graef highly suggests that it performs the credit/debit accounting function as described in col. 13, lines 25-35 and col. 14, lines 25-55. Note that this is how all bill handling devices operate. Graef similarly is considered to suggest a configuration to "accept a dispense change instruction from said host processor", since this is how bill handling devices operate as described in both Graef and Ramachandran. See, for example, Graef at col. 6, lines

Art Unit: 3653

14-25. Ramachandran discloses that the machine performs accounting and tracking at col. 26, lines 14-18.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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